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EXAMINER	
LEUNG, CHRISTINA Y	

ART UNIT	PAPER NUMBER
2633	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/007,024	Applicant(s) BREZINA ET AL.	
	Examiner Christina Y. Leung	Art Unit 2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 June 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5,7,8,10,12-15 and 18-20* is/are rejected.

7)☒ Claim(s) *4,6,9,11,16 and 17* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 June 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☒ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings were received on 15 June 2005. These drawings are acceptable.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-3, 5, 7, 8, 10, 12-15, and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Degura (US 5,684,614 A) in view of Ito (US 6,658,214 B1).

Regarding claims 1 and 10, Degura discloses an apparatus for controlling an optical transceiver (Figure 2) having an optical signal generator (electro-optical converter 13) and a detector (main signal detector 18), the apparatus comprising:

an output lens 14 for transmitting an optical output signal from the generator 13;

a monitor optical signal generator for generating a reference optical signal (i.e., the transmitter including a pilot signal generator located at a identical, opposing transceiver, disclosed but not explicitly shown in Figure 2; column 4, lines 34-46);

a monitor optical signal detector (angle deviation detector 19) for receiving the reference optical signal (column 4, lines 42-46); and

a reflective surface (including beam splitter 17; column 3, lines 63-67; column 4, lines 1-3) adapted for receiving the reference signal from the monitor optical signal generator and for directing the reference signal to the monitor optical signal detector (column 4, lines 34-46).

Regarding claim 10 in particular, Degura discloses additional reflective surfaces, including element 16, which has a first reflective segment adapted for receiving the reference optical signal from the monitor optical signal generator and a second reflective segment thereof for directing the reference optical signal to the monitor output signal detector.

Degura discloses that the detector 18 receives an optical input signal (column 4, lines 40-42) but does not specifically disclose an input lens for directing an optical input signal at the detector. Degura also does not specifically disclose a lens housing.

However, Ito teaches a system related to the one disclosed by Degura, including an optical signal generator 20, detector 28, output lens 21, and reflective surfaces (Figures 4 and 5). Ito further teaches an input lens 27 for receiving and directing an optical input signal at the detector 28 (column 7, lines 7-13). Ito also teaches a housing to mount the output lens, input lens, and reflective surfaces (column 3, lines 50-52).

Regarding both claims 1 and 10, it would have been obvious to a person of ordinary skill in the art to include an input lens as taught by Ito in the system disclosed by Degura in order to ensure that incoming light is properly focused and received by the detector element. It also would have been obvious to a person of ordinary skill in the art to include a lens housing as taught by Ito in the system disclosed by Degura in order to protect the components from the external environment as well as to connect and properly align the optical components.

Regarding claim 2, Degura discloses that the reference optical signal is substantially identical the optical output signal. The output optical signal generated by the optical signal generator 13 as discussed above also includes a pilot signal "substantially identical" to the reference/pilot signal generated by the monitor optical signal generator from the opposite side.

Regarding claim 3, Degura discloses a controller (system control unit 26) adapted for receiving a monitoring signal from the monitor optical signal detector 19 indicative of the reference optical signal, and for controlling the output optical signal of the generator in response to the monitoring signal (the system control unit 26 controls the output optical signal of the generator using beam variable means 29, for example; column 4, lines 55-63; column 5, lines 53-62).

Regarding claim 5, Degura discloses that the reflective surface (such as reflective element 16) includes a first and a second reflective segment thereof, with the first reflective segment adapted for receiving the reference optical signal from the monitor optical signal generator and directing the reference optical signal to the second reflective segment, and with the second reflective segment adapted for receiving the reference signal from the first reflective segment and directing the reference signal to the monitor optical signal detector.

Regarding claim 7, Degura discloses that the optical output and input signals are directed through the system substantially parallel to one another (the output and input signals travel along the same path in a parallel fashion between element 15 and the outside environment).

Regarding claim 8, Degura discloses that the reference optical signal travels to and from the lens housing in substantially parallel fashion (the reference signals sent from the device and the reference signals received from the opposite device travel along the same path in a parallel fashion between element 15 and the outside environment).

Regarding claim 12, Degura discloses a method for controlling an optical transceiver (Figure 2) having an optical signal generator (electro-optical converter 13) and an optical signal detector (main signal detector 18), the method comprising:

providing a monitor optical signal generator for generating a reference optical signal (i.e., the transmitter including a pilot signal generator located at a identical, opposing transceiver, disclosed but not explicitly shown in Figure 2; column 4, lines 34-46); and a monitor optical signal detector (angle deviation detector 19) for receiving the reference optical signal (column 4, lines 42-46);

mounting an output lens in a system having a reflective surface (including reflective elements 16 and 17) for receiving the reference optical signal from the monitor optical signal generator and directing the reference optical signal to the monitor optical signal detector;

generating an optical output signal from the optical signal generator 13;

directing the output optical signal through the output lens 14;

receiving and directing the optical input signal to the optical signal detector 18;

generating a reference optical signal with the monitor optical signal generator (using pilot signal generator 12 in the opposing transceiver; column 4, lines 34-46);

receiving the reference optical signal at the reflective surface of the lens housing; and

directing the reference signal to the monitor optical signal detector (reflective surface 17 reflects the reference signal to the monitor optical signal detector 19).

Again, Degura discloses that the detector 18 receives an optical input signal (column 4, lines 40-42) but does not specifically disclose an input lens for directing an optical input signal at the detector. Degura also does not specifically disclose a lens housing.

However, Ito teaches a system related to the one disclosed by Degura, including an optical signal generator 20, detector 28, output lens 21, and reflective surfaces (Figures 4 and 5). Ito further teaches an input lens 27 for receiving and directing an optical input signal at the

detector 28 (column 7, lines 7-13). Ito also teaches a housing to mount the output lens, input lens, and reflective surfaces (column 3, lines 50-52).

Regarding claim 12, it would have been obvious to a person of ordinary skill in the art to include an input lens as taught by Ito in the method disclosed by Degura in order to ensure that incoming light is properly focused and received by the detector element. It also would have been obvious to a person of ordinary skill in the art to include a lens housing as taught by Ito in the method disclosed by Degura in order to protect the components from the external environment as well as to connect and properly align the optical components.

Regarding claim 13, Degura discloses operating the monitor optical signal generator with a reference signal substantially identical to the output optical signal. The output optical signal generated by the optical signal generator 13 as discussed above also includes a pilot signal "substantially identical" to the reference/pilot signal generated by the monitor optical signal generator from the opposite side.

Regarding claim 14, Degura discloses comparing the reference optical signal to a standard reference and adjusting the output optical signal to achieve a desired reference optical signal (column 5, lines 7-62). In particular, Degura discloses comparing the reference optical signal received by the angle deviation detector 19 to a reference such as a filter, having the expected frequency of the reference signal, which passes the signal if the frequency of the signal matches. Degura also discloses adjusting the output optical signal using beam variable means 29 in response to the reference optical signal (column 4, lines 55-63; column 5, lines 53-62).

Regarding claim 15, Degura discloses adjusting the output optical signal as a function of the reference optical signal received at the monitor optical signal detector. Again, Degura

discloses adjusting the output optical signal using beam variable means 29 in response to the reference optical signal received at the angle deviation detector 19 (column 4, lines 55-63; column 5, lines 53-62).

Regarding claims 18 and 19, Degura discloses that the reference signal is reflected and received within one side of the communication system (using elements including beam splitter 17; column 3, lines 63-67; column 4, lines 1-3 and lines 34-46), and again, Ito further teaches enclosing the elements on a side of a communication system with a housing. Again, it would have been obvious to a person of ordinary skill in the art to include a lens housing as taught by Ito in the method disclosed by Degura in order to protect the components from the external environment as well as to connect and properly align the optical components.

Regarding claim 20, Degura discloses an apparatus for controlling an optical transceiver (Figure 2) having an optical signal generator (electro-optical converter 13) and a detector (main signal detector 18), the apparatus comprising:

an output lens 14 for transmitting an optical output signal from the generator 13;

a monitor optical signal generator 12 for generating a reference optical signal;

a monitor optical signal detector (the angle deviation detector 19 located at a identical, opposing transceiver, disclosed but not explicitly shown in Figure 2) for receiving the reference optical signal (column 4, lines 42-46); and

a reflective surface (including angle adjustment drive mechanism 16; column 3, lines 59-62) adapted for receiving the reference signal from the monitor optical signal generator and for directing the reference signal to the monitor optical signal detector (column 4, lines 34-46).

Examiner respectfully notes that claim 1, on which claim 20 depends, recites a monitor optical signal generator and a monitor optical signal detector, but does not specifically recite the location of those elements in relation to other elements in the claim. With regard to claim 1, Examiner notes that Degura discloses a monitor optical signal generator comprising the transmitter including a pilot signal generator located at a identical, opposing transceiver from the optical signal generator and detector and discloses a monitor optical signal detector comprising angle deviation detector 19 as shown in Figure 2. With regard to claim 20, however, Examiner notes that Degura discloses a monitor optical signal generator 12 as shown in Figure 2 and discloses a monitor optical signal detector comprising the angle deviation detector located at a identical, opposing transceiver from the optical signal generator and detector.

Degura discloses that the reference signal is reflected prior to transmission (using angle adjustment drive mechanism 16) and discloses one output lens 14 for transmitting an optical output signal from the generator 13 but does not specifically disclose that the reference signal also travels through the same output lens as the output signal after reflection.

However, Ito teaches a system related to the one disclosed by Degura including output lenses 21, 9, and 8B for transmitting output signals (Figure 5). Ito specifically teaches lenses 9 and 8B for focusing output signals after they have been reflected within the system. It would have been obvious to a person of ordinary skill in the art to include a final output lens for transmitting signals after they had been reflected within the system as taught by Ito in the system disclosed by Degura in order to ensure that the output signal and the output monitor signal already disclosed by Degura is properly focused as it exits the system toward the opposing transceiver.

Further regarding claim 20, Degura also discloses that the detector 18 receives an optical input signal (column 4, lines 40-42) but does not specifically disclose an input lens for directing an optical input signal at the detector or a lens housing.

However, Ito teaches a system related to the one disclosed by Degura, including an optical signal generator 20, detector 28, output lens 21, and reflective surfaces (Figures 4 and 5). Ito further teaches an input lens 27 for receiving and directing an optical input signal at the detector 28 (column 7, lines 7-13). Ito also teaches a housing to mount the output lens, input lens, and reflective surfaces (column 3, lines 50-52).

It would have been obvious to a person of ordinary skill in the art to include an input lens as taught by Ito in the system disclosed by Degura in order to ensure that incoming light is properly focused and received by the detector element. It also would have been obvious to a person of ordinary skill in the art to include a lens housing as taught by Ito in the system disclosed by Degura in order to protect the components from the external environment as well as to connect and properly align the optical components.

Allowable Subject Matter

1. Claims 4, 6, 9, 11, 16, and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

2. The following is a statement of reasons for the indication of allowable subject matter: The prior art, including Degura and Ito, does not specifically disclose or fairly suggest an apparatus for controlling an optical transceiver having an optical signal generator and a detector including the specific combination of all the elements and limitations recited in claims 4, 6, 9,

11, 16, and 17 (and including all the limitations of the parent claims on which they depend), particularly wherein the optical signal generator, monitor optical signal generator, monitor optical signal detector, and optical signal detector is disposed in that order in a planar array; or particularly wherein the lens housing encloses the monitor optical signal generator and the monitor optical signal detector as recited, and wherein the reflective surface receives the reference signal within the lens housing and directs the reference signal to the monitor optical signal detector within the lens housing.

Response to Arguments

3. Applicants' arguments filed 15 June 2005 with respect to claims 1, 10, and 12 have been fully considered but they are not persuasive.

4. In response to Applicants' argument that the combination of Degura and Ito is improper, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). Examiner respectfully notes that Degura already discloses an output lens and a reflective surface, and that Ito is relied upon to provide a general teaching of providing an input lens for additionally focusing input light and providing a housing to mount elements in an optical communication system to protect them from an external environment.

5. Regarding Applicants' argument on page 12 of their response that Degura does not disclose "transmit[ting] a coded signal...directly to the same unit that just coded the signal, then

decode the coded signal with the same device that had just coded the signal," it is noted that the features upon which applicant relies are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Examiner respectfully notes that claims 1, 10, and 12 currently do not specifically recite a location of the monitor optical signal generator in relation to the lens housing or monitor optical signal detector and does not specifically require that the monitor optical signal generator is located on the same side of the optical communications as the monitor signal detector which receives the output of the generator. Degura discloses "an apparatus for controlling an optical transceiver" using an outside monitor optical signal generator to generate a reference optical signal, as recited in the claims, wherein a reflective surface and a monitor optical signal detector receives this reference optical signal, as also recited in the claims.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicants are reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christina Y. Leung whose telephone number is 571-272-3023. The examiner can normally be reached on Monday to Friday, 6:30 to 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 571-272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Art Unit 2633